

Flow Visualization in the OSU

Tina Emami

The FAA's heat release test's structure and forced air causes some variance inside the machine which could affect the way samples burn. This research is based on measuring the airflow inside the OSU, understanding its causes, and designing a simple fix to the machine in order for the airflow to produce more repeatable results during testing. Particle Image Velocimetry (PIV) was used to measure and understand the airflow inside of a mock-up Plexiglas OSU. This helps to understand how the structure and build of the machine affects how the air flows throughout the unit.